

# SIEMENS

PATENT  
Attorney Docket No. 2002P13477WOUS

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Inventor:	R. Heller et al.	)	Group Art Unit:	2157
		)		
Serial No.:	10/527,927	)	Examiner:	Kim, Hee Soo
		)		
Filed:	10/11/2005	)	Confirmation No.:	7622
Title:	SYSTEM AND METHOD FOR UPDATING INFORMATION			

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Commissioner For Patents  
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COMMISSIONER FOR PATENTS

### APPELLANTS' BRIEF UNDER 37 CFR 41.37

Sir:

This brief is in furtherance of the Notice of Appeal filed in this application on 23 May 2008.

#### 1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in this Appeal is the assignee of the present application, Siemens Aktiengesellschaft.

**2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)**

There is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

**3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)**

Claims canceled: 1 - 18, 21, 22, 30 and 32.

Claims withdrawn but not canceled: None.

Claims pending: 19, 20, 23 - 29, 31 and 33-36.

Claims allowed: none.

Claims rejected: 19, 20, 23 - 29, 31 and 33-36.

The claims on appeal are 19, 20, 23 - 29, 31 and 33-36. A copy of the claims on appeal is attached hereto in the Claims Appendix.

**4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)**

In response to the Final Office Action mailed 25 January 2008 the Appellants submitted argument without amendment to the claims under 37 CFR 1.116. The Examiner entered the Response filed under Rule 116 as indicated by the Advisory Action mailed 10 April 2008. The Advisory Action does not indicate any change in the grounds of rejection presented in the Final Office Action.

**5. SUMMARY OF THE CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)**

With reference by page and line numbers to the detailed description, the following summary references one or more exemplary embodiments described in the Specification and

which are covered by specific claims, but it is to be understood that the claims are not so limited in scope.

#### 5A. BRIEF BACKGROUND PROVIDING CONTEXT FOR THE SUMMARY OF CLAIMED SUBJECT MATTER

The invention provides a system and method for updating information on a client. Communications in a Web environment generally involve servers, which make available information in the form of displayable pages, and clients (so-called browsers) which display the pages made available by the servers. Typically, the client/server system is organized in a way that the server does not know its clients. A client only calls up or requests information from the server as a result of user actions. In response, a new Web page or a new version of the same page is downloaded to the client.

Client/servers systems of this type are increasingly used in the industrial environment. The clients display information relating, for example to industrial production processes. In system applications of this type, new items of information are continuously sent to the client via, for example, programmable controllers or diagnostic devices such as sensors, as applicable. The information often must be promptly displayed to the user of the client, e.g., a plant operator. Thus items of information are frequently sent to the servers, and the clients retrieve the required data from the server. However, in a client/server system of this type, particularly in an industrial environment, that the client is not in general made aware that the values which it is displaying on a page have changed, e.g., become outdated, such that the display made available to the user no longer corresponds with the reality.

Typically, in the past, such updating of information has been effected by the Web client, after a defined time interval, by automatically and periodically making a new request for the appropriate information and refreshing the Web page. A disadvantage of this is that while the Web page is being refreshed it is not displayed to the user of the client and, for a brief time, no information is available to the user for operational purposes. In addition, the inflexible use of a time interval for updating purposes has the consequence that a page is frequently refreshed and requested, even though there is no new information. Superfluous page refreshment and time consuming data transfer has thus been the rule with this refresh process.

5B. CONCISE EXPLANATION OF SUBJECT MATTER DEFINED IN EACH INDEPENDENT CLAIM

5B(i). Summary of Subject Matter Defined In Independent Claim 19

The invention relates to updating displayable information on a client. This is relevant to, among other applications, monitoring and controlling manufacturing processes. In accord with the single Figure 1 in the application, **independent claim 19** is directed to a system 1 for updating a set of multiple items of information 4<sub>i</sub> displayable on a client display (e.g., a video display by means of the browser 2) in order to monitor and control a manufacturing production process. See page 9, lines 17- 24. The system includes:

- (1) a server 3 connected to receive the multiple items of information 4<sub>i</sub> from a programmable controller or from a diagnostic device 10 in a manufacturing plant and configured to provide the items of information 4<sub>i</sub> to the client 9 for viewing all of the set of multiple items at one time on the client display. See page 9, line 24 - page 10, line 9.
- (2) first mechanisms 5 which define an information unit for each of the multiple items in the set, assigning to each unit 4<sub>i</sub> an identifier 8<sub>i</sub>, managing the identifiers 8<sub>i</sub> to identify the information units 4<sub>i</sub> and assigning an update stamp  $t(8_n)$  to each identifier. See page 9, line 24 - page 10, line 5. The system 1 also includes a data transmission device 11 (e.g., an intranet) for receiving new items of information or transmitting the new items of information between the server 3 and the client 9 to provide updated information units on the client display (e.g., a video display by means of a browser). See page 10, lines 9 - 15.
- (3) second mechanisms 6 for assigning the new items of information, each corresponding to an updated item, to the identifiers 8<sub>i</sub> and for each new item also assigning a new update stamp  $t(8_n)$  indicating that the new item is a more current information unit than an information unit previously assigned to the same identifier; See page 10, lines 2 - 5.

- (4) third mechanisms 7 for sending an updated information unit to the client to replace an information unit having the same identifier and already used in the display based on whether a new update stamp has been assigned. See page 10, lines 9-15. See, also, page 10, line 17 - page 12, line 24.

**5B(ii). Summary of Subject Matter Defined In Independent Claim 28**

Also in accord with the single Figure 1, **independent claim 28** is directed to a method for displaying and updating multiple items of information 4<sub>i</sub> relating to control of a manufacturing production process in an industrial plant system for display on at least one client 9. See page 9, lines 17 - 24. The method includes:

- (1) providing the items of information from a programmable controller or diagnostic device 10 in the plant to make data relevant to control of the manufacturing production process available on a server. See page 9, line 24 - page 10, line 9.
- (2) displaying the multiple items of information 4<sub>i</sub> together in a screen view on a client display (e.g., a video display by means of the browser 2) wherein the individual items of information 4<sub>i</sub> are separately identifiable and provided in the form of information units such that information units corresponding to different items of information are separately assigned time stamps t(8<sub>i</sub>) and are separately updatable. See page 9, lines 28 - 32.
- (3) providing identifiers 8<sub>i</sub> to identify individual ones of the information units 4<sub>i</sub>. See page 9, lines 27-28.
- (4) transmitting multiple new items of information from the programmable controller or diagnostic device in the plant, each new item corresponding to an update to an information unit previously assigned a time stamp, to the server or to the at least one client; See page 10, lines 5 - 10.
- (5) assigning each of the new items of information 4<sub>i</sub> to one of the identifiers 8<sub>i</sub> and assigning to each said new item a updated time stamp t(8<sub>i</sub>) which indicates that said new item is an update relative to a previously received and displayed item of information 4<sub>i</sub> assigned to the same identifier 8<sub>i</sub>. See page 9, lines 29 - page 10, line 12; and page 10, line 20 - page 11, line 6.

(6) determining by comparing values of an updated stamp with a previously assigned time stamp whether any of the items of information has been modified relative to a previously received item. See page 10, lines 9 - 12.

#### 6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL - 37 CFR 41.37(c)(1)(vi)

Whether claims 19, 20, 23-29, 31 and 33-36 are unpatentable under 35 U.S.C. Section 103 over U.S. Patent No. 6,505,247 (Steger) in view of U.S. Patent No. 6,094,686 (Hawes).

#### 7. ARGUMENT 37 CFR 41.37(c)(1)(vii)

##### 7A. APPELLANTS TRAVERSE ALL ART REJECTIONS.

###### With Regard to the Art Rejections, Patentability of Each Claim is to be Separately Considered

Appellant urges that patentability of each claim should be separately considered. All of the claims are separately argued. General argument, based on deficiencies in the rejection of independent claims 19 and 28 under Section 103 demonstrates patentability of all dependent claims. However, none of the rejected claims stand or fall together because each dependent claim further defines a unique combination that patentably distinguishes over the art of record. For this reason, the Board is requested to consider each argument presented with regard to each dependent claim. Argument demonstrating patentability of each dependent claim is presented under subheadings identifying each claim by number.

7A(1) REJECTION OF THE INDEPENDENT CLAIMS 19 AND 28 UNDER SECTION 103 IS IN ERROR.

The Appellants traverse all of the claim rejections under 35 USC 103 because the combination of Steger in view of Hawes used to reject independent claims 19 and 28 fails to disclose each feature recited in the claims.

7A(1)i REJECTION OF INDEPENDENT CLAIM 19 UNDER SECTION 103 BASED ON STEGERIN VIEW OF HAWES IS IN ERROR.

Application of the combination of Steger in view of Hawes under Section 103 results in deficiencies that render the rejection of claim 19 incorrect. Claim 19 is directed to a system for updating a set of multiple items of information displayable on a client display in order to monitor and control a manufacturing production process. In attempting to reject the claims the Final Office Action incorrectly asserts that numerous claimed features are found in the Steger reference. Examples now follow.

The claimed

"server connected to receive the multiple items of information from a programmable controller or from a diagnostic device in a manufacturing plant and configured to provide the items of information to the client for viewing all of the set of multiple items at one time on the client display ..."

is asserted as being disclosed by Steger at col. 7, lines 3-10 and col. 8, lines 14-19. A review of these passages confirms that neither of these citations relates to this subject matter. MPEP 2143.03 provides that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered for judging the patentability of the claim against the prior art. This deficiency was brought to the attention of the Examiner in the Response filed under Rule 116, but the advisory action is silent in this regard. It is only the Appellants who teach

"a server ... configured to provide the items of information to the client for viewing all of the set of multiple items at one time on the client display ...

It is error when the rejection fails to give weight to the language of the claims.

The rejection further asserts that the feature

first mechanisms for defining an information unit for each of the multiple items in the set, assigning to each unit an identifier, managing the identifiers to identify the information units and assigning an update stamp to each identifier;

is found at col. 3, lines 37-41 when the cited text does not at all suggest

defining an information unit for each of the multiple items in the set, assigning to each unit an identifier, managing the identifiers to identify the information units and assigning an update stamp to each identifier;

The reference appears inconsistent with and teaches away from the claimed feature because the reference appears to suggest assigning a single timestamp to the block of data elements without regard to each individual information unit. As noted at col. 3, lines 38-39, the block of data elements is from one or more hardware devices. Nor is there disclosure for **assigning to each unit an identifier** or for **assigning an update stamp to each identifier**.

Another example which evidences the deficiency in this rejection is the attempt to read applicants' "third mechanisms" on Col. 19, lines 25-35 of Steger when the prior art does not teach or suggest sending an updated information unit to the client to replace an information unit having the same identifier and already used in the display **based on whether a new update stamp has been assigned**. The Appellants do not disagree that the citation discloses providing only data elements which have changed, but this is not the extent of what is required by the language of claim 19. Appellants require that the "third mechanism" send the updated information to replace that which is used in the display **based on whether a new update stamp has been assigned**. The prior art does not make such use of the claimed update stamp. In the Advisory Action the Examiner has disagreed, arguing that cols 11 and 12 of Steger do show such use of Appellants' time stamp, but this is not so. The citations certainly do reference sending a time stamp but do not at all disclose making use of the time stamp as claimed. Further, it seems that the reference is not consistent with the claimed feature because, at col. 12, lines 1-3 Steger discloses that only a single time stamp is sent to reduce network traffic. There is no indication that the Steger reference uses Appellant's "update stamp" to decide whether to send an updated information unit to replace another information unit. Rather, the citation from Steger makes no conditional relationship between a change in an update stamp and replacement of information.

Furthermore, another deficiency of the rejection is that none of the citation relates to viewing **all** of the set of multiple items **at one time on the client display**. In fact, it is clear that while the rejection relies upon Col. 19, lines 25-35 of Steger to show providing a changed data block to a client, (1) this is not conditioned upon a change in a time stamp and (2) this is not in conjunction with replacing an information unit **in a display**.

For all of these reasons the Steger reference does not provide the requisite disclosure which the rejection has relied upon the Steger reference to provide.

Nor does the Hawes reference at all compensate for any of these deficiencies. The rejection relies upon Hawes for stating at col. 5, lines 3-9 that portions of a page are cacheable, but more is required to meet the terms of the claims. For example, claim 19 recites

first mechanisms for defining an information unit for each of the multiple items in the set, assigning to each unit an identifier, managing the identifiers to identify the information units and assigning an update stamp to each identifier;

and the requirement for finding this subject matter is not met by the mere disclosure that portions of a page are cacheable. Reversal of the rejection is therefore required.

#### 7A(1)ii REJECTION OF INDEPENDENT CLAIM 28 UNDER SECTION 103 BASED ON STEGER IN VIEW OF HAWES IS ALSO IN ERROR.

Application of the combination of Steger in view of Hawes under Section 103 results in deficiencies that also render the rejection of claim 28 incorrect. Claim 28 is directed to a method for displaying and updating multiple items of information relating to control of a manufacturing production process in an industrial plant system for display on at least one client. In attempting to reject claim 28 the Final Office Action incorrectly asserts that numerous claimed features are found in the Steger reference. Summarily, the method of claim 28 is distinguishable because it provides the ability determine whether individual items of information, among multiple items of information, have been modified so that the client can be sent updated information without sending information that has not been updated. The Steger reference does not make this distinction. Specifically, and as noted above with respect to claim 19, the Steger reference does not use a time stamp for this purpose.

Claim 28 includes several features which, contrary to allegations set forth in the final rejection, are not to be found in the Steger reference. Examples follow.

Claim 28 requires:

"displaying ... multiple items of information together in a screen view on a client display wherein the individual items of information are separately identifiable and provided in the form of information units ..."

The rejection contends this subject matter is disclosed in Steger at col. 7, lines 3-10 and col. 8, lines 14-19, but as also urged with respect to certain features of claim 19, review of these passages confirms that neither of these citations relates to claimed subject matter. In the case of claim 28, it is not understood how the Examiner can even infer the above-quoted subject matter.

The rejection also contends that Steger discloses at col. 19, lines 25-35

"determining by comparing values of an updated stamp with a previously assigned time stamp whether any of the items of information has been modified relative to a previously received item ..."

but this is not the case. In fact, there is no suggestion that Steger uses a time stamp for this purpose. Rather, the cited text only indicates that a changed time stamp is provided to a client.

With regard to the Hawes reference, the rejection acknowledges that Steger fails to disclose

"displaying the multiple items of information together in a screen view on a client display wherein the individual items of information are separately identifiable and provided in the form of information units such that information units corresponding to different items of information are separately assigned time stamps and are separately updatable ..."

but fails to find the requisite disclosure in Hawes to compensate for this deficiency. The Hawes reference is relied upon for stating that a portion of a page is cacheable (col. 5, lines 3-9) but this is not sufficient disclosure to meet the above-quoted terms of claim 28. There is no disclosure of a display. Nor is there indication that individual items of information on a display are separately identifiable and provided in the form of information units such that information units corresponding to different items of information are separately assigned time stamps and are separately updatable. For all of these reasons the rejection must be reversed.

7B REJECTION OF THE DEPENDENT CLAIMS 20, 23-27, 29, 31 AND 33-36 OVER STEGER IN VIEW OF HAWES UNDER SECTION 103 IS IN ERROR.

7B(1) REJECTION OF DEPENDENT CLAIM 20 UNDER SECTION 103 IS IN ERROR.

Claim 20 further distinguishes because "one of the information units in the display is updated based on whether a new update stamp has been assigned to it and wherein one of the information units in the display is not updated in the absence of a new update stamp having been assigned to it." The rejection again cites Steger at col. 19, lines 25-35, but as already noted this passage is devoid of disclosure relating to the requisite display. Nor does the prior art make an update based on whether a new update stamp is assigned. Reversal of the rejection is in order.

7B(2) REJECTION OF DEPENDENT CLAIM 23 UNDER SECTION 103 IS IN ERROR.

The server of claim 23 is adapted for providing items of information received from programmable controllers or systems, and/or diagnostic devices or systems. The rejection fails to contemplate that claim 23 is a combination of features and not merely provision of information from controllers or diagnostic devices. Appellants claim a combination which is not taught or suggested.

7B(3) REJECTION OF DEPENDENT CLAIM 24 UNDER SECTION 103 IS IN ERROR.

The rejection of claim 24 fails to contemplate the combination of features which is not merely a recitation that the server is a Web server. Appellants claim a combination which is not taught or suggested.

**7B(4) REJECTION OF DEPENDENT CLAIM 25 UNDER SECTION 103 IS IN ERROR.**

According to claim 25, the first mechanisms and/or the second mechanisms and/or the third mechanisms are provided for the purpose of installation on the server. Contrary to the argument presented to reject claim 25, the Steger reference cannot disclose such because, as already noted, this reference does not disclose the claimed third mechanism or a display.

**7B(5) REJECTION OF DEPENDENT CLAIM 26 UNDER SECTION 103 IS IN ERROR.**

The rejection of claim 26 fails to contemplate the combination of features which is not merely a recitation that the identifiers are Uniform Resource Identifiers as used in the Web environment. Appellants claim a combination which is not taught or suggested.

**7B(6) REJECTION OF DEPENDENT CLAIM 27 UNDER SECTION 103 IS IN ERROR.**

According to claim 27, the device for the transmission of data takes the form of an Intranet and/or the Internet. The rejection of claim 27 fails to contemplate the combination of features.

**7B(7) REJECTION OF DEPENDENT CLAIM 29 UNDER SECTION 103 IS IN ERROR.**

According to claim 29, different ones of the items of information displayed according to the information units are each updated when a comparison indicates that an updated time stamp has been assigned to an associated identifier. The rejection again cites Steger at col. 19, lines 25-35 but this reference is totally deficient. The recited subject matter is absent and the claim should be allowed.

**7B(8) REJECTION OF DEPENDENT CLAIM 31 UNDER SECTION 103 IS IN ERROR.**

According to claim 31, a device for operating and monitoring the production process is used as the client. The rejection of claim 31 fails to contemplate the combination of features

which is not merely a recitation that the identifiers are Uniform Resource Identifiers as used in the Web environment. Appellants claim a combination which is not taught or suggested.

**7B(9) REJECTION OF DEPENDENT CLAIM 33 UNDER SECTION 103 IS IN ERROR.**

The rejection of claim 33 fails to contemplate the combination of features which is not merely a recitation that a Web server is used as the server. Appellants claim a combination which is not taught or suggested.

**7B(10) REJECTION OF DEPENDENT CLAIM 34 UNDER SECTION 103 IS IN ERROR.**

According to claim 34, the step of determining by comparing values of an updated stamp with a previously assigned time stamp is performed. The prior art fails to contemplate the combination of features which is not merely a recitation that stamps are prepared. For example, the prior art does not suggest using the result of such comparison to determine whether to replace an information unit used in a display.

**7B(11) REJECTION OF DEPENDENT CLAIM 35 UNDER SECTION 103 IS IN ERROR.**

According to claim 35, the identifiers are special Uniform Resource Identifiers as used in an Internet or Intranet environment. The prior art fails to contemplate the combination of features.

**7B(12) REJECTION OF DEPENDENT CLAIM 36 UNDER SECTION 103 IS IN ERROR.**

According to claim 36, the device for the transmission of data is an Intranet and/or the Internet. The rejection of claim 31 fails to contemplate the combination of features. Appellants claim a combination which is not taught or suggested.

### 7C. CONCLUSION

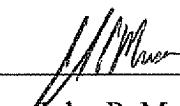
Argument has been presented to demonstrate that the rejections under Section 103 are deficient and that the dependent claims further distinguish over the prior art. The Examiner has argued rejections when claimed features are absent from the references and not suggested by the prior art. Accordingly, none of the rejections can be sustained. For all of the above argued reasons, all of the rejections should be withdrawn and the claims should be allowed.

### 8. APPENDICES

An appendix containing a copy of the claims involved in this appeal is provided herewith. No evidence appendix or related proceedings appendix is provided because no such evidence or related proceeding is applicable to this appeal.

Respectfully submitted,

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## 9. APPENDIX OF CLAIMS ON APPEAL

19. A system for updating a set of multiple items of information displayable on a client display in order to monitor and control a manufacturing production process, the system comprising:

    a server connected to receive the multiple items of information from a programmable controller or from a diagnostic device in a manufacturing plant and configured to provide the items of information to the client for viewing all of the set of multiple items at one time on the client display;

    first mechanisms for defining an information unit for each of the multiple items in the set, assigning to each unit an identifier, managing the identifiers to identify the information units and assigning an update stamp to each identifier;

    a data transmission device for receiving new items of information or transmitting the new items of information between the server and the client to provide updated information units on the client display;

    second mechanisms for assigning the new items of information, each corresponding to an updated item, to the identifiers and for each new item also assigning a new update stamp indicating that the new item is a more current information unit than an information unit previously assigned to the same identifier; and

    third mechanisms for sending an updated information unit to the client to replace an information unit having the same identifier and already used in the display based on whether a new update stamp has been assigned.

20. The system in accordance with Claim 19, wherein one of the information units in the display is updated based on whether a new update stamp has been assigned to it and wherein one of the information units in the display is not updated in the absence of a new update stamp having been assigned to it.

23. The system in accordance with Claim 19, wherein the server is adapted for providing items of information received from programmable controllers or systems, and/or diagnostic devices or systems.
24. The system in accordance with Claim 19, wherein the server is a Web server.
25. The system in accordance with Claim 19, wherein the first mechanisms and/or the second mechanisms and/or the third mechanisms are provided for the purpose of installation on the server.
26. The system in accordance with Claim 19, wherein the identifiers are Uniform Resource Identifiers as used in the Web environment.
27. The system in accordance with Claim 19, wherein the device for the transmission of data takes the form of an Intranet and/or the Internet.

28. A method for displaying and updating multiple items of information relating to control of a manufacturing production process in an industrial plant system for display on at least one client, the method comprising:

providing the items of information from a programmable controller or diagnostic device in the plant to make data relevant to control of the manufacturing production process available on a server;

displaying the multiple items of information together in a screen view on a client display wherein the individual items of information are separately identifiable and provided in the form of information units such that information units corresponding to different items of information are separately assigned time stamps and are separately updatable;

providing identifiers to identify individual ones of the information units;

transmitting multiple new items of information from the programmable controller or diagnostic device in the plant, each new item corresponding to an update to an information unit previously assigned a time stamp, to the server or to the at least one client;

assigning each of the new items of information to one of the identifiers and assigning to each said new item a updated time stamp which indicates that said new item is an update relative to a previously received and displayed item of information assigned to the same identifier ; and

determining by comparing values of an updated stamp with a previously assigned time stamp whether any of the items of information has been modified relative to a previously received item.

29. The method in accordance with Claim 28, wherein different ones of the items of information displayed according to the information units are each updated when a comparison indicates that an updated time stamp has been assigned to an associated identifier.

31. The method in accordance with Claim 28, wherein a device for operating and monitoring the production process is used as the client.

33. The method in accordance with Claim 28, wherein a Web server is used as the server.
34. The method in accordance with Claim 28, wherein the step of determining by comparing values of an updated stamp with a previously assigned time stamp is performed on the server.
35. The method in accordance with Claim 28, wherein the identifiers are special Uniform Resource Identifiers as used in an Internet or Intranet environment.
36. The method in accordance with Claim 28, wherein the device for the transmission of data is an Intranet and/or the Internet.

10. EVIDENCE APPENDIX - 37 CFR 41.37(c) (1) (ix)

None

11. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c) (1) (x)

None